Pleases insert the abstract as a separate sheet following the claims.

ABSTRACT OF THE DISCLOSURE

In a signal encoding system, a pre-encoder encodes a signal and generates a pre-encoded signal. In addition, the pre-encoder generates encoding assistance data which is stored in a signal storage together with the pre-encoded signal. When the signal is retrieved from the signal storage, it is decoded in a decoder and a watermark is inserted in the decoded signal to generate a watermarked signal. The watermarked signal is then re-encoded, possibly at a different encoding rate, in a re-encoder. The re-encoder is operable to re-encode the watermarked signal in response to the encoding assistance data. Thus, encoding assistance data may be generated at encoding prior to storage and the encoding assistance data may be used to facilitate re-encoding of a watermarked signal when retrieved. The invention is particular advantageous for applications wherein pre-encoding is performed once whereas re-encoding is frequently performed, such as for example a client-server music download application.